

Title (en)
METHOD AND SYSTEM FOR IDENTIFYING THE GRAM TYPE OF A BACTERIUM

Title (de)
VERFAHREN UND SYSTEM ZUR IDENTIFIZIERUNG DES GRAMTYPUS EINER BAKTERIE

Title (fr)
PROCEDE ET SYSTEME D'IDENTIFICATION DU TYPE DE GRAM D'UNE BACTERIE

Publication
EP 3257947 A1 20171220 (FR)

Application
EP 16174717 A 20160616

Priority
EP 16174717 A 20160616

Abstract (en)
[origin: WO2017216190A1] A detection of the Gram type of a bacterial strain comprises: illumination, in the wavelength range 415 nm- 440 nm, of at least one bacterium from said strain having a natural electromagnetic response in said range; acquisition, in the range 415 nm- 440 nm, of a light intensity reflected by, or transmitted through, said illuminated bacterium; and determining the Gram type of the bacterial strain as a function of the light intensity acquired in the range 415 nm- 440 nm.

Abstract (fr)
Une détection du type de Gram d'une souche bactérienne, comprenant : - l'éclairage dans la gamme de longueurs d'onde 415nm-440nm d'au moins une bactérie de ladite souche ayant une réponse électromagnétique naturelle dans ladite gamme; - l'acquisition, dans la gamme 415nm-440nm, d'une intensité lumineuse réfléchie par, ou transmise au travers de, ladite bactérie éclairée; et - la détermination du type de Gram de la souche bactérienne en fonction de l'intensité lumineuse acquise dans la gamme 415nm-440nm.

IPC 8 full level
C12Q 1/04 (2006.01)

CPC (source: EP US)
C12Q 1/04 (2013.01 - EP US); **G01N 21/01** (2013.01 - US); **G01N 21/25** (2013.01 - US); **G01N 2021/174** (2013.01 - US)

Citation (applicant)
• K. VARMUZA; P. FILZMOSE: "Introduction to Multivariate Statistical Analysis in Chemometrics", 2009, CRC PRESS
• A. RINNAN; F. VAN DEN BERG; S. ENGELSEN: "Review of the most common pre-processing techniques for near-infrared spectra", TRENDS IN ANALYTICAL CHEMISTRY, vol. 28, no. 10, 2009
• A. SAVITZKY; M.J.E. GOLAY: "Smoothing and differentiation of data by simplified least squares procedures", ANAL. CHEM., vol. 36, 1964, pages 1627 - 1639
• ERIC LALOUM: "Une méthode chimiométrique originale d'identification de produits par spectroscopie proche infrarouge", SPECTRA ANALYSE, vol. 33, no. 237, 2004

Citation (search report)
• [A] WO 2010077304 A2 20100708 - BIO MERIEUX INC [US], et al
• [A] BOSOON PARK ET AL: "Hyperspectral microscope imaging methods to classify gram-positive and gram-negative foodborne pathogenic bacteria", TRANSACTIONS OF THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS, AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS, ST.JOSEPH, MI, US, vol. 58, no. 1, 1 January 2015 (2015-01-01), pages 5 - 16, XP008182213, ISSN: 0001-2351, DOI: 10.13031/TRANS.58.10832
• [A] LUNA-PINEDA T; SOTO-FELICIANO K; DE LA CRUZ-MONTOYA E; LONDONO L C P; RIOS-VELAZQUEZ C; HERNANDEZ-RIVERA S P: "Spectroscopic characterization of biological agents using FTIR, normal Raman and surface-enhanced Raman scattering", PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 6554, 9 April 2007 (2007-04-09) - 27 April 2007 (2007-04-27), USA, pages 1 - 11, XP040239960, ISSN: 0277-786X, DOI: 10.1117/12.720338
• [A] GUILLEMOT MATHILDE ET AL: "Hyperspectral imaging for presumptive identification of bacterial colonies on solid chromogenic culture media", OPTICAL SENSING II, SPIE, 1000 20TH ST. BELLINGHAM WA 98225-6705 USA, vol. 9887, 27 April 2016 (2016-04-27), pages 98873L - 98873L, XP060069290, ISSN: 0277-786X, ISBN: 978-1-62841-971-9, DOI: 10.1117/12.2229761

Cited by
FR3129406A1; CN111492064A; US11905545B2; US12006529B2; CN111492065A; JP2021506288A; WO2023094775A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3257947 A1 20171220; EP 3257947 B1 20181219; CN 109415753 A 20190301; CN 109415753 B 20220708; ES 2716170 T3 20190610; JP 2019522970 A 20190822; JP 6872566 B2 20210519; US 11408819 B2 20220809; US 2019323948 A1 20191024; WO 2017216190 A1 20171221

DOCDB simple family (application)
EP 16174717 A 20160616; CN 201780036791 A 20170613; EP 2017064454 W 20170613; ES 16174717 T 20160616; JP 2018565828 A 20170613; US 201716310487 A 20170613